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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/406,087	09/24/1999	RYOTA AKIYAMA	1341.1030/JD	1217

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EXAMINER
BROWN, CHRISTOPHER J

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/406,087	AKIYAMA ET AL.
	Examiner	Art Unit	
	Christopher J Brown	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>27-44</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>27-44</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments with respect to independent claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 28, and 33 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. "creates a first authenticator by applying the first one way function to one of the data divisions to be applied and a last result of the first one way function" is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The examiner could not find a reference to the use of the "last result" in creation of the "first authenticator" in the instant specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27 recites the limitation "the first and second keys" in line 9. There is insufficient antecedent basis for this limitation in the claim. There is no mention of "a first key". Appropriate correction is required.

Claims 28-31 are rejected based on their dependence on rejected independent claim 27.

Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 33 states "creates a first authenticator by applying the first one way function to one of the data divisions to be applied and a last result of the first one way function". This claim is indefinite because the system is creating a "first" authenticator, but there is a "last result" from the first one-way function. If the system is creating a "first" authenticator, there should be no "last result". Also, the invention as stated in claim 32, acknowledges that a first one-way function, and a second one-way function are used on divided data. The invention does not state that the functions are used more than once, it teaches away from this method.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

Claims 27, 32, and 37-44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schlafly US 5,299,197 in view of Shear US 6,157,721

As per claims 27, 32, and 37-44 Schlafly discloses a first authenticator creating unit

(server) for dividing the information into a plurality of data (packets) (Col 2 lines 33-37).

Schlafly discloses that each has a prespecified length (length field), (Col 4 line 31).

Schlafly discloses that the authenticators are created by applying a one-way function

(hash, checksum) to each of the divided data, (Col 4 lines 47-54).

Schlafly discloses linking the authenticators to the divided data (in packet field). Schlafly

discloses a certifying unit that recalculates the authenticator and checking to see that the

recalculated authenticator data matches the send authenticator data, (Col 4 lines 50-54).

Schlafly does not disclose using a different key and algorithm to create a one-way hash

on each of the divided data.

Shear teaches using a variety of different authenticator creation algorithms and using

different keys on divided data, (Col 16 lines 12-36, Fig 9). It would be obvious to one

skilled in the art to modify the signing system of Shlafly with the multiple algorithm and

keys of Shear so that it is more difficult to break the encryption by cryptanalytic attack

(Shear Col 16 lines 33-36).

As per claims 24-26, Shlafly discloses the data may be document data, (image), (Col 3

lines 35-40).

Claims 29, 31, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schlafly in view of Shear US 6,157,721 in view of Dolan US 5,604,801

As per claims 29, 31, 34 and 36, the previous Schlafly-Shear combination does not

disclose truncation. Dolan discloses generating a digital signature made up of an

encrypted hash of the message, (Col 6 lines 1-12). The digital signature is a second

authenticator, made of the original message, which contains the first authenticator, thus

the first authenticator is truncated to the information.

It would be obvious to modify the Schlafly-Shear combination with Dolan's digital

signature so the receiver will be able to authenticate the sender, thus making the

transmission more secure.

As per claims 3, and 8, Shear teaches using a first and second key different from each

other to create authenticators, (Col 16 lines 30-36).

Claims 30 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Schlafly in view of Shear US 6,157,721 in view of Dolan US 5,604,801 in view of

Bellare US 5,757,913

As per claims 30 and 35, the previous Schlafly-Shear-Dolan combination does not disclose parallel processing.

Bellare discloses parallel processing, (Col 1 lines 60-65).

It would have been obvious to one of ordinary skill in the art to modify the Schlafly-Shear-Dolan combination with Bellare's parallel processing to improve speed and efficiency.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
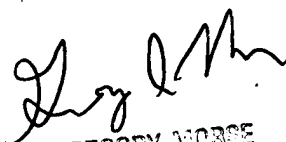
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J Brown whose telephone number is (571)272-3833. The examiner can normally be reached on 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571)272-3838. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher J Brown   03/04/05

GREGORY MORSE
SUPERVISORY PATENT EXAMINER
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